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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,600	11/20/2001	Khai Pham	19903.0002	8932
23517	7590	11/02/2004	EXAMINER	
SWIDLER BERLIN SHEREFF FRIEDMAN, LLP			GODDARD, BRIAN D	
3000 K STREET, NW			ART UNIT	
BOX IP			PAPER NUMBER	
WASHINGTON, DC 20007			2161	

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/988,600

Applicant(s)

PHAM ET AL.

Examiner

Brian Goddard

Art Unit

2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3, 9, 10, 12, 19, 26 and 33-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 9, 10, 12, 19, 26 and 33-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. This communication is responsive to the Amendment filed 20 May 2004.
2. Claims 1-3, 9, 10, 12, 19, 26 and 33-38 are pending in this application. Claims 1, 12, 19 and 26 are independent claims. In the Amendment filed 20 May 2004, claims 1, 9, 10, 12, 19 and 26 were amended; claims 4-8, 11, 13-18, 20-25 and 27-32 were cancelled; and claims 33-38 were added. This action is non-final.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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4. Claims 1-3, 9, 10, 12, 19, 26 and 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,960,170 to Chen et al. in view of U.S. Patent Application Publication No. 2002/0143825 to Feinberg.

Referring to claim 1, Chen discloses an anti-virus program executable by a computer system as claimed. See Figures 1-5 and the corresponding portions of Chen's specification for this disclosure. Chen teaches an anti-virus program [450] executable by a computer system [See Figs. 1-3] comprising:

virus scanning routines [454] operable to scan a file and detect a virus;

virus removal routines [460] operable to remove the detected virus from the file, the virus removal routines comprising a text editor [treatment object / remedial routine], operable to search [scan for cleaning patterns (See disclosure of Cleaning Module and Cleaning Pattern Module)] and modify a textual portion [stripping out or replacing infected portions (See column 15, line 54 et seq.)] of the file under control of virus removal instructions; and

the virus removal instructions [458 & 462], which are operable to cause the text editor to remove a virus from the textual portion of the file;

wherein the text editor comprises a search function [remedial scanning function] operable to search a textual portion of a file using a regular expression [strings making up the signatures] specifying a pattern [See 462] of text [strings] to be matched [as with the detection scanning functions (See Columns 13-15)];

wherein the text editor comprises a mark function ['marker'] operable to mark text matching the regular expression that was found by the search function [See Column 14, lines 32-48]; and

wherein the text editor comprises a delete function [See e.g. Column 15, line 54 et seq.] operable to delete text marked by the mark function ['stripping out infected portions'] as claimed.

Chen does not explicitly teach that the search and mark functions are operable to search for and mark a start of text to be marked and an end of text to be marked, while the delete function is operable to delete text between the start marker and end marker as claimed.

Feinberg discloses a text editor similar to that of Chen, capable of searching for patterns in text and marking them for modification. See Figures 2-4 and the corresponding portions of Feinberg's specification for this disclosure. In particular, Feinberg teaches a text editor [205] comprising: a search function ['scanning' module] operable to search the textual portion of a file using a regular expression specifying a pattern of text to be matched [See ¶ 0021, 0029 & Claim 1]; a mark function operable to mark text matching the regular expression that was found by the search function [See ¶ 0021, Fig. 4 & Claim 1]; and a modify function ['correction' module] operable to modify text marked by the mark function [See ¶ 0021, Fig. 4 & Claim 1]; wherein: the search function is operable to search for a start of text to be marked and the mark function is operable to mark a start marker at the start of text [See Summary, Fig. 4 & Claim 1]; the search function is operable to search for an end of text to be marked and the mark

function is operable to mark an end marker at the end of text [See Summary, Fig. 4 & Claim 1]; and the modify function is operable to modify text between the start marker and the end marker [See Summary, Fig. 4 & Claim 1].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the functionality of Feinberg's search, mark and modify functions to the text editor of Chen's system, wherein Feinberg's modify function is set to delete the text as taught by Chen, to obtain the invention as claimed. One would have been motivated to do so in order to accurately and efficiently identify a pattern of text (as taught by Feinberg) that matches that of a virus during a full scan (as taught by Chen) to account for Chen's silence on the details of the full text virus scan (also termed the 'second type of detection').

Referring to claims 2-3, Chen v. Feinberg discloses the anti-virus program as claimed. See Columns 13-14 of Chen's specification for the details of this disclosure, as well as Figure 4 and the corresponding portion of Feinberg's specification. Chen v. Feinberg teaches the anti-virus program of claim 1, as above, wherein the removed virus is located on one line of text [single, string-by-string match for signature (See 'first type of detection')], or on a plurality of lines of text [string matching for adjacent portions (See 'second type of detection')] as claimed.

Claims 9 and 10 are rejected on the same basis as claims 2 and 3 respectively. See the discussions regarding claims 1-3 above for the details of this disclosure.

Claims 12, 19 and 26 are rejected on the same basis as claim 1 above. See the discussion regarding claim 1 for the details of this disclosure. In particular, Chen v.

Feinberg discloses a method, system and computer program product for removing a virus from a textual portion of a file infected with a virus by “loading the infected file [Chen: Steps 250-260 and 590-625]” and subsequently performing the actions of claim 1 above as claimed.

Referring to claims 33 and 34, Chen v. Feinberg discloses the anti-virus program as claimed. Specifically, Chen v. Feinberg teaches the anti-virus program of claim 1, as above, wherein the text editor is capable of actions including load current or particular module and start edit actions [See Chen’s Background & Summary and Fig. 3 of Feinberg], match ... [any] line actions [See Feinberg Fig. 4], a delete marked positions action [See discussion of claim 1 above], a global pattern match and delete action [See Chen Steps 525-535], delete single or all word processor macro reference actions [See Chen Fig. 5 & corresponding portion of specification and Column 23, lines 16-17], a display current line action [See Feinberg Abstract, Summary & Fig. 4], and a save edit action [See Feinberg Fig. 4] as claimed.

As per the remainder of claim 34, as well as claim 35, neither Chen nor Feinberg explicitly disclose a reset cursor position to beginning of the file action or the case sensitivity actions as claimed. However, the examiner takes Official Notice that it was common practice at the time of applicants’ invention to include these actions/capabilities in word processors and text editors used for any purpose. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a reset cursor position action and case sensitivity actions in the text editor of

Chen v. Feinberg to obtain the invention as claimed. One would have been motivated to do so in order to navigate/search through a file with ease and efficiency.

Referring to claims 36 and 37, Chen v. Feinberg teaches the anti-virus program of claim 1, as above, wherein the regular expression includes both plain text and special characters [Feinberg: Fig. 4] to indicate a type of matching that is to be performed, wherein the special characters include a branch [e.g. dash], a piece [e.g. separator], an atom [e.g. number], and a range [e.g. end] as claimed.

Referring to claim 38, Chen v. Feinberg teaches the anti-virus program of claim 1, as above, wherein current actions of the text editor are dependent on previous actions [See If-Then branching of Feinberg's scanning routine in Fig. 4] as claimed.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-3, 9, 10, 12, 19, 26 and 33-38 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Specifically, the U.S. Patent documents to Woods and Chess are considered particularly pertinent to applicants' claimed invention, while the remaining documents made of record are considered pertinent to applicants' disclosure and/or portions of applicants' claimed invention.




7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Goddard whose telephone number is 571-272-4020. The examiner can normally be reached on M-F, 9 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

bdg  
26 October 2004



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